

BRUYEVICH, S. V.

Jul/Aug 53

USSR/Geology - Silica of the Sea

"Geochemistry of Silica in the Sea," S. V. Bruyevich

Iz Ak Nauk SSSR, Der Geol, No 4, pp 67-79

Discusses data on the physical chemistry and the contents of silicic acid in waters of sea and oceans and in ground solns of the sea. From an analysis of the data, the author gives a conclusion concerning the impossibility of extensive chemogenic settling of silicic acid from marine water in consequence of the nonsatn of marine water by silicic acid. The principal way of removing silicic acid from marine water is by biogenic settling.

262T4

BRUYEVICH, S.V.
BRUYEVICH, S. V.

USSR/Geography - Atmospheric deposits

Card : 1/1 Pub. 45 - 2/20

Authors : Bruevich, S. V., and Gudkov, M. P.

Title : Atmospheric dust over the Caspian Sea

Periodical : Izv. AN SSSR, Ser. geog. 4, 18 - 28, July - August 1954

Abstract : The role of atmospheric dust, in the formation of pelagian ocean deposits, is explained. Data, proving the settling of atmospheric dust on the surface of seas and oceans as well as on the ice of the arctic and antartic, are included. The origin of atmospheric dust, is explained. Thirty-two references: 21 - USSR; 2 - German; 7 - USA and 2 - French (1894 - 1950). Tables.

Institution : Acad. of Sc. USSR, Institute of Oceanology

Submitted :

Translation M-812, 10 Oct 54

~~BRUYEVICH, S.V.~~
BRUYEVICH, S.V.

USSR .

Nitrites and nitrification in the sea. S. V. Bruyevich. Trudy Inst. Okeanol., Akad. Nauk S.S.S.R. 6, 3-17 (1967). Review of the attempts to account for the formation of NO_2^- in the sea, especially in the open ocean far from the shore and the bottom; the summer location of the region of max. NO_2^- concn. below the layer where photosynthesis is taking place; the discontinuity in d. and the discontinuity in P and S concns.; and the variation of this location in winter and near the mouths of streams. 34 references. J. H. Scott

BRUYEVICH, S.V., professor, doktor khimicheskikh nauk

Chemistry of the sea. Nauka i shizn' 22 no.9:29-32 S'55.
(Sea water) (MIRA 8:12)

BRUYEVICH, S.V.

Biogenic elements in solutions from the Okhotsk Sea bed. Dokl. AN
SSSR 105 no.3:519-522 N '55. (MLRA 9:3)

1. Institut okeanologii Akademii nauk SSSR. Predstavleno akademikom
S.I. Mironovym.
(Okhotsk, Sea of--Ocean bottom)

GULYAYEVA, Lidiya Aleksandrovna; BRUYEVICH, S.V., otvetstvennyy redaktor;
CHEPIKOVA, I.M., redaktor izdatel'stva; MAKUNII, Ye.V., tekhnicheskii redaktor

[Geochemistry of Devonian and carboniferous deposits of the
Kuybyshev region of the Volga Valley] Geokhimiia otlozhenii devona
i karbona Kuibyshevskogo povolzh'ia. Moskva, Izd-vo Akademii nauk
SSSR, 1956. 140 p. (MLRA 9:7)
(Kuybyshev region--Geology)

14-57-7-14915

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,
p 117-118 (USSR)

AUTHOR: Bruyevich, S. V.

TITLE: Chemical Investigations Made by the Institute of
Oceanography of the AS USSR in the Far Eastern Seas
and Adjacent Sections of the Pacific Ocean (Khimicheskiye issledovaniya Instituta okeanologii AN SSSR na dal'nevostochnykh moryakh i v prilegayushchey chasti Tikhogo okeana)

PERIODICAL: Tr. In-ta okeanol. AN SSSR, 1956, Vol 17, pp 18-40

ABSTRACT: More than 150 000 chemical determinations were made on the vessel "Vityaz" cruising the northwestern part of the Pacific Ocean and adjacent waters. The Sea of Okhotsk forms a gulf of the Pacific Ocean, and generally reproduces the features of the latter's vertical structure. However, certain processes taking

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14-57-7-14915

Chemical Investigations Made by the Insititute (Cont.)

place in the ocean water influence the sea. The largest amount of biogene elements (BE) from the lower horizon passes into the trophogene layer at the northeastern part of the sea outside of the Gulf of Shelekhov and in the Gulf of Shelekhov itself. In terms of BE rising to the surface and of the total amount of phytoplankton, this is one of the richest areas in the waters of the world. Phytoplankton activity supersaturates the upper layer of the sea with O_2 . The maximum of O_2 concentration, which is definitely seasonal in character, is related to the changes in the phytoplankton layer. The zone of minimum O_2 is the same in both the ocean and the Sea of Okhotsk. The sea surrounding the Kurilian Islands and the adjacent deep ocean waters contain some of the heaviest nitrate concentrations in the world (500 to 600 mg N/cu m). The surface waters of the Sea of Okhotsk are poor in nitrates (0 to 10 mg N/cu m), the content of which increases only in places where deep waters rise to the surface. In summer and autumn nitrites collect below the zone of change in the BE content. This fact is related to the oxidation of the

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Chemical Investigations Made by the Institute (Cont.)

decomposition products of plankton detritus. Widespread distribution of ammoniacal nitrogen causes the enrichment of the western part of the sea with this compound. As far as the vertical distribution of silicon is concerned, the Sea of Okhotsk is merely a continuation of the adjacent section of the ocean; approximately the same is true of the distribution of phosphate phosphorus. The deep waters of the southern Sea of Okhotsk basin have one of the highest phosphate phosphorus contents in the world (up to 80 or 90 mg P/cu m). A characteristic of the hydrochemical structure of the Bering Sea is the dome-like pattern of its isolines. They rise over the central part of the sea where the water is deep, and sink at the continental shelf near the shore and near the edge of the northern shoals. The Bering Sea has probably the highest phosphate content of any open body of water in the world (up to 139 mg P/cu m in deep layers, and up to 87 mg P/cu m at the surface in winter). Its maximum nitrate content is 9 to 10 mg N/cu m. In summer and autumn the maximum nitrite concentration lies below the zone of change in phosphate

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Chemical Investigations Made by the Institute (Cont.)

content (25 m to 50 m deep). The content of amiacal nitrogen tends to increase toward the bottom. A thick layer of water with a minimum of dissolved O₂ is found in the Bering Sea; its O₂ content is 1 ml/liter or less, and it is about 500 m to 1500 m thick. Absence of minimum O₂ zone in deep waters and a 60 percent or more O₂ saturation in the bottom water of abyssal depth distinguishes the Sea of Japan from the other Far Eastern seas. Although their supplies of BE for phytoplankton are lower than those of the other seas in the Far East, the waters adjacent to the Soviet Eastern Siberian seaboard exhibit a winter phosphorus and silicon content of 30 mg P/cu m and 300 to 400 mg Si/cu m respectively. During the growing season the BE content falls to 10 mg P/cu m and 100 mg Si/cu m. In the deepest waters of the Kurilian-Kamchatka depression aeration was found to be comparatively high; O₂ saturation at 8140 m level is 43.8 percent. The waters in the northwestern part of the Pacific Ocean may be described as follows: 1) temperature and salinity increase in the upper 25 m in the south; 2) thickness of the

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Chemical Investigations Made by the Institute (Cont.)

biologically depleted BE surface layer increases to the south, while BE content decreases; 3) the zone of minimum O₂ is deeper in the south, and its O₂ content diminishes in the same direction; 4) the zone of maximum phosphate content coincides approximately with the zone of minimum O₂; 5) the cold bottom waters coming from the Arctic carry much more O₂, less phosphates, and somewhat less silica. Bottom deposits have been studied chiefly to determine the properties of their biogene layer under conditions of natural water content. The average pH value in the upper 10 cm of deposits in the Sea of Okhotsk and the Bering Sea is 7.4 and 7.6, but in the deeper sedimentary layer of these seas pH generally increases to 8.2 or 8.3 and sometimes to 8.6 or 8.7. The paper describes the oxidizing-reducing properties of the upper sedimentary layer in these seas, and the type of interchangeable cations. The distribution of BE in the bottom sediments of the open part of the ocean is essentially the same as in the sediments of other seas; they are thicker but accumulate at a slower rate in deep ocean water than in the seas.

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* Chemical Investigations Made by the Institute (Cont.)

* Future studies should center on determining the balance of the chemical matter in the Pacific Ocean. A bibliography of 13 titles is included.

Card 6/6

A. Shpaykher

Chemistry of sediments of Okhotsk Sea. S. V. Bruchev
Trudy Inst. Okeanol. Akad. Nauk S.S.S.R. 17. 41-122
1966. A detailed account is given of the chemical composition
of Okhotsk sediments. The author discusses the results of his
own work and the work of other investigators.

One of the main problems in the study of the Okhotsk Sea is the question of the origin of its sediments. The author discusses the results of his own work and the work of other investigators. The distribution of Cl in the sediments reflects the winter freezing conditions, with local overabundances of Cl being associated with locales in which severe freezing or level drops of water have taken place. Cl tends to be higher in the Southern depression of the sea. Alky. of sedimental moisture rises with increased depth and indicates that decomposition and oxidation processes are not limited to the upper 1-1.5 m. of depth. Ammonium N is higher in sedimental soils than in the water immediately above the sediment and it tends to rise closer inshore.

G. M. Kozlov

BRUYEVICH, S.V.

Vertical distribution of biogenic elements in the sediment solutions
of the Okhotsk Sea. Dokl. AN SSSR 111 no.2:391-394 N '56.

(MIRA 10:1)

1. Predstavleno akademikom N.M.Strakhovym.
(Okhotsk Sea of --Sedimentation and deposition)

BRUYEVICH, S.V., SOLOV'YEVA, N.F.

Balance of biogenous elements in the Aral Sea and change of this balance in connection with hydraulic constructions, Gidrokhim, mat. 26:25-48 '57. (MLRA 10:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii, Moskva.
(Aral Sea--Organic matter)

20-241/67

AUTHOR BRUYEVICH S.V.

TITLE The salinity of sediments solutions (interstitial waters) of the Okhotsk sea. (Solenoost'gruntovyykh rastvorov Okhotskogo morya.- Russian)

PERIODICAL Doklady Akademii Nauk SSR 1957, Vol 113, Nr 2, pp 387-390 (U.S.S.R.)

ABSTRACT The horizontal and vertical dispersion of the salinity of water which impregnates marine sediments were systematically investigated in a few seas. In 1949 the author investigated its dispersion in the upper layer (scumming layer) of the Okhotsk sea as well as in deeper layers. Comparison between the content of chlorine of the upper sediment layer and the content in the deeper horizons of the sea water are of the most interest. The difference ΔCl characterizes the varying intensity of water extraction by ice-formation (congealing) in the north, which in the south, however, increases by evaporation. Ill. 1 shows the spatial dispersion of the ΔCl -values in the Okhotsk sea. According to this the content of chlorine in sediment solutions of the main part of the central part of the sea at present is below the content of chlorine of the deepest water layer. This anomaly can be traced back to the recent high content in this last mentioned layer, which had occurred under the intensified congealing of the water. The author regards this

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of the Okhotsk sea. 20-241/67

situation as due to climate by extremely cold winters 1943-1949. The region of the decidedly more positive values of the ΔCl lies in the Shelekhov-bay. Here in this part of the sea which is situated furthest north and is the most remote, the strong winterly ice-formation is the cause of the most intense Cl-content of the water layers near to the ground. Here, at about 57° of northern latitude, the Cl-content of the sediment solution as well as of the water near to the ground is also greatly diminished (less than 19 ‰). A little further to the south the Cl-content in the sediment solution increases systematically in accordance with the depth within a 3-meter-layer. On the other hand, the Cl-content at the parallel of the north cape of Sakhalin in the ground modifies only little towards the bottom ($19 - 19.2 \text{ ‰}$). At the parallel of the Sakhalin-center the Cl-content in the ground is much higher than in the water near to the ground. The former considerably increases to the bottom compared with the north Sakhalin parallel (up to 19.5 ‰); in greater depths (about 3 m), however, it decreases again. Along the cross-section of cape Terpeniya-Kambal'nyy-bay the Cl-content within the 3-meter-

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The salinity of sediments solutions (interstitial waters)
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layer is much lower than in the central parts, probably by the discharge of fresh water from the mainland. Within the Sakhalin-current the values of the Cl-content decrease accordingly from the geological past to the present times, somewhat similar as against the mouth of the Shelekov-bay. The decrease of the Cl-content within the upper 1/2 meter of the ground is observed in many places. At the same time it increases at the very same spot up to over 20 ‰ at some places. In monolites, which were obtained by means of tubes of 18-27 m length, it is possible to follow up the Cl-content into the quaternary. In the 18 m monolite it usually lies at 19.5 - 19.6 ‰, falls to 19.2 ‰ at some spots or increases to 20 ‰ in the central part of the sea. The results of measurements east of the middle Sakhalin-part did not give the slightest reason to doubt the fact that some ten thousand years ago the southern sea basin together with the area adjacent in the north contained much more salt water (by some ten to 1 ‰)

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then now. It could be presumed that the increase of salt content even included the northern part of the sea. For the adjacent parts of the open Pacific the results of the station 167 are at hand (schedule 1). It is recognized that the sediments of the upper 1 m here have a salinity which lies near the present one, whereas the Cl-content of the layer 1 - 7 m lies within the limits 19.4 - 19.6 ‰ (near to the mean 19.5 - 19.6 ‰). Thus the high increase of chlorine content in the sediments of the Ochootsk sea is not connected with a similar one in the geological part of the Pacific, but with the physical-geographical conditions of the Ochootsk sea itself. The most natural cause here was a winterly water congealing in the rough climate, which has been distinct for years.

(1 illustration, 1 schedule, 9 citations from publications.)
ASSOCIATION: Institute for Oceanology of the Academy of Science of the U.S.S.R.

PRESENTED BY: N.M. Strakhov, Member of the Academy.

SUBMITTED: 15.8. 1957

AVAILABLE: Library of Congress.

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BRUYEVICH, S.V.

PHASE I BOOK EXPLOITATION

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Akademiyā nauk SSSR. Okeanograficheskaya komissiya

Okeanologicheskkiye issledovaniya severo-zapadnoy chastī Tikhogo Okeana
(Oceanographic Research of the Northwestern Part of the Pacific
Ocean) Moscow, Izd-vo AN SSSR, 1958. 148 p. (Series: Its:
Trudy, t. 2) 1,600 copies printed.

Resp. Ed.: Zenkevich, L.A., Corresponding Member, USSR Academy of
Sciences; Ed. of Publishing House: Reznichenko, O.G.; Tech. Ed.:
Polyakova, T.V.

PURPOSE: The collection of articles is intended for oceanographers
and naval personnel, and also for piscatologists.

COVERAGE: This collection of articles reports the results of obser-
vations made in the Pacific by the Institute of Oceanology of the
Academy of Sciences, USSR. In 1949, the Institute launched a
systematic five-year program of scientific exploration of certain
hydrographic peculiarities of the Soviet Pacific area. The

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Oceanographic Research (Cont.)

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operations were carried out as a "Complex Oceanographic Expedition," using the motorboat Vityaz' as its base. The Expedition worked in collaboration with the Hydrographic Institute of the Soviet Navy (VMS), the Pacific Institute of Piscatology and Oceanography, and some 40 other institutes of the Academy of Sciences. Between 1949 and 1954, 18 trips were made, covering about 130,000 miles. Among the subjects of direct concern were: meteorology, hydrology, oceanography, hydrochemistry, sedimentation, geography of the littoral, geology and contours of the sea bottom, fauna, plankton, microbiology, and gravimetry. Twenty-eight authors contributed to the collection which consists of 27 articles. There are: 6 gables, 23 diagrams, 3 illustrations (photographs of the littoral), 4 maps. There are no references.

TABLE OF CONTENTS:

Kort, V.G. Explorations of the Soviet Far Eastern Seas and Adjacent Pacific Ocean Areas, Carried Out from 1949-54 by the Institute of Oceanology of the Academy of Sciences, USSR

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Oceanographic Research (Cont.)

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Batalin, A.M. Oceanological Exploration of Far Eastern Seas With
Regard to Piscatology

28

This is a resume of a report. It urges special study of the migration of fish to facilitate finding the areas of accumulation. A program of taking systematic photographs during the first 10 days of February, May, August, and November is recommended. This should be done by several vessels simultaneously. The article mentions that such methods have already been successfully used by the Japanese.

Bruyevich, S.V. Chemical Investigations Carried Out by the
Institute of Oceanology in Far Eastern Seas and the Adjacent
Areas of the Pacific Ocean

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Reference is made to Vol. 17 of Trudy of the Institute of Oceanology which contains the full text of the problems discussed in the present collection. The subjects of this article are chemistry of sedimentation, observations of the behavior of oxygen, pH, alkalinity, and the presence of various chemical elements.

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BRUYEVICH, S.V.

Chemical research of the Institute of Oceanography of the Academy of Sciences of the U.S.S.R. in the Far East seas and adjoining part of the Pacific Ocean, Trudy Okean. kom. 3:29-31 '58.

(MIRA 11:8)

(Far East--Oceanographic research)

BRUYEVICH, S.V.

Present conditions and outlook for the development of marine chemistry.
Trudy Inst. okean. 26:3-7 '58. (MIRA 11:10)
(Geochemistry)

BRUYEVICH, S.V.; ZAYTSEVA, Ye.D.

Chemistry of Bering Sea sediments. Trudy Inst. okean. 26:8-108 '58.

(MIRA 11:10)

(Bering Sea--Sedimentation analysis)

BRUYEVICH, S.V.

Standardizing the methods of sea-water chemical analysis and of
expressions of their results. Trudy Inst. okean. 26:243-246 '58.

(MIRA 11:10)

(Sea water--Analysis)

AUTHOR: Bruyevich, S. V.

20-118-4-39/61

TITLE: Salinity of Sediment Solutions in the Bering Sea
(Solenost' gruntovykh rastvorov Beringova morya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 4, pp. 767-770
(USSR).

ABSTRACT: After a short survey of the systematic investigations of the salinity of embedded marine water (references 1 - 10) the author describes the results of the Vth voyage of the ship "Vityaz'" (August - September 1950) in the Bering Sea. The chlorine content of the upper layer (up to approximately 10 cm thickness) was determined in the sediments and that of the deeper horizons in tubular monoliths (up to 16 cm long) (table 1). The comparison of the chlorine content of the bottom solution Cl_{Gr} with the chlorine content of the bottom-near water Cl_w is expressed by the quantity ΔCl which amounts to $Cl_{Gr} - Cl_w$. ΔCl is positive in a normal stabilized hydrological regime. ΔCl was mostly negative in the water region investigated. This proves an increase of the chlorine content during

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Salinity of Sediment Solutions in the Bering Sea

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the last years (figure 1). The absolute amount of ΔCl is lower in greater depths and vice versa. ΔCl is in the Bering Sea equal to a hundredth or few tenths partes pro mille, exceptionally (in minor depths) higher than one pars pro mille. Positive ΔCl values are found at the boundary to the Tikhii Ocean (Pacific) in the Kamchatskiy channel. The largest region of positive values lies in the east of the region investigated, between the 58th and 62nd parallel. The values of the major part of the Anadyrskiy gulf are also positive. This is connected with a more stable hydrological regime. In the southern part of the Bering Sea (main part, greater depths) ΔCl is expressed only by hundredths up to few tenths partes pro mille of chlorine. In the extreme eastern part of the Anadyrskiy gulf (62° - 64° northern latitude) the absolute negative values of ΔCl are comparatively very high, which points to a rapid increase of the salinity of the bottom-near water during recent times.¹⁵ tubular monoliths (figures 1,2) served for the determination of the vertical distribution of the chlorine content in the sediment. In shallow places (up to a depth of 200 m) the bottom solutions as well as the bottom-near water are characterized by a somewhat reduced chlorine content. This corresponds to the fact that shallow districts become brackish. Only in the Anadyrskiy gulf (station number 568) the chlorine content of the horizon 120 - 127 cm rises

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Salinity of Sediment Solutions in the Bering Sea

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up to 20,63‰ which is caused by a considerable freezing of the water during the winter. In the deeper parts of the sea (in depths of more than 2000 m) the two points of highest salinity (20,05‰ - depth 153-160 cm and 20,25‰ - depth 56-66 cm) are apparently connected with the frozen winter waters which flowed down into the depth. In the other depth stations the chlorine content of the bottom solutions is usually approximated to the recent oceanic (19,38‰) ones or higher by 0,1 - 0,2‰. In a monolith of 16 m length the Cl-content rises here and there (below 9 m) up to 19,7‰. Thus the chlorine content was in the course of the first half of Quaternary time in the deeper part of the Bering Sea approximated to that of the ocean or higher by 0,1 - 0,3‰, most rarely still higher. This higher content is explained by the author by the influence of locally frozen water.

There are 2 figures, 1 table and 10 references, 7 of which are Soviet.

ASSOCIATION: Institute for Oceanology, AS USSR (Institut okeanologii Akademii nauk SSSR).

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BRUYEVICH, S. V.

"Chemical Exchange Between Sea-Water and Sediments."
report to be submitted for the Intl. Cong. New York City, 31 Aug - 11 Sep 1959.
Oceanographic

(Institute of Oceanology, Moscow)

BOGOROV, V.G.; BRUYEVICH, S.V.; FEDOSOV, M.V.; UDINTSEV, G.B.

Methods of oceanographic research in the U.S.S.R. Nek. probl.
i rez. okean. issl. no.1:12-16 '59. (MIRA 13:2)
(Oceanographic research)

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SOV/20-127-3-56/71

AUTHORS: Bruyevich, S. V., Shishkina, O. V.

TITLE: On the Palaeohydrology of the Black Sea During Late Quaternary

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3,
pp 673 - 676 (USSR)

ABSTRACT: After a short survey of publications on the investigation of the hydrology of the Black Sea basin (Refs 1,2) the authors mention a non-palaeontological method for the hydrological characterization of the geological past which was used on the expedition ship of the institute mentioned in the Association (first author) in April 1949. This method is a direct determination of the chlorine content (salt content) of the squeezed-out base solutions with which the sediments to be investigated are saturated (Ref 4). Thus a considerable decrease of the salt content in the buried waters of the Novo-Evksinskiy (New Euxinian) Basin (up to 4‰ chlorine, 7.25‰ salt content) as compared with the recent waters near the ground (12.2-12.4‰ chlorine content) could be found. This confirms completely the assumption of N.I. Andrusov, A. D. Arkhangel'skiy and N. M. Strakhov that the Black Sea was subjected to a considerable de-

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On the Palaeohydrology of the Black Sea During Late
Quaternary

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salification during the New-Euxinian phase of its development. This was confirmed by the second author (Ref 7) in 1956. Table 1 and figure 1 show that in the mass of monoliths the chlorine content of the buried waters increases linearly or almost linearly in upward direction. This indicates very even uninterrupted salification of the Black Sea which is still continued. This conclusion is based upon objective material and agrees with reference 6 according to which the complex of New-Euxinian brackish organisms is displaced by marine mediterranean varieties. Thanks to the linear character of the change of the chlorine content the problem of diffusion can be solved. The distribution of the chlorine content along the length of the monolith is determined by the actual change of chlorine content in water. A gravitational mixing of the solutions is possible only in the uppermost sediment strata with a high water content. The salification of the Black Sea may be related to increasing dryness of the climate, rising surface of the ocean in connection with the end of the last glacial phase, sporadic regression of the glaciers during the post-glacial period, and finally to the probable depression of the continent around the straits of the Black Sea by erosion near the ground or the depression of the entire

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On the Palaeohydrology of the Black Sea During Late
Quaternary

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region of the Black Sea. The author concludes that the ever-increasing water exchange with the Mediterranean and not the change of climate is the decisive factor of salification. This theory does not exclude cyclic climatic fluctuations; but the water exchange dominates over the climatic factor. Salification takes place at a rate of $\sim 0.20 - 0.25\%$ of chlorine content per 1000 years, to give a rough approximation. There are 1 figure, 1 table, and 12 references, 9 of which are Soviet.

ASSOCIATION: Institut okeanologii Akademii nauk SSSR (Institute of Oceanography of the Academy of Sciences, USSR)

PRESENTED: March 13, 1959, by S. I. Mironov, Academician

SUBMITTED: March 10, 1959

Card 3/3

DRACHEV, S.M., prof.; RAZUMOV, A.S.; SKOPINTSEV, B.A.; KABANOV, N.M.;
BRUYEVICH, S.V.; SOSUNOVA, I.N.; GOLJBEVA, M.T.; BRUK, Ye.S.;
MOGILEVSKIY, Ya.A.; RUFFEL', M.A.; KORSH, L.Ye.; ANOKHIN, V.L.;
BYLINKINA, A.A.; MEL'NIKOV, Ye.B., red.; BEL'CHIKOVA, Yu.S.,
tekhn.red.

[Methods of studying waters from the point of view of sanitation]
Priemy sanitarnogo izucheniia vodoemov. Pod red. S.M.Dracheva.
Moskva, Gos.izd-vo med.lit-ry, 1960. 354 p.

(MIRA 13:11)

(Water--Analysis)

BRUYEVICH, S.V.; ZAYTSEVA, Ye.D.

Chemistry of sediments in the northwestern part of the Pacific
Ocean. 42:3-88 '60. (MIRA 13:10)
(Pacific Ocean--Sediments (Geology))

BRUYEVICH, S.V.; BOGOYAVLENSKIY, A.N.; MOXIYEVSKAYA, V.V.

Hydrochemical characteristics of the Sea of Okhotsk. Trudy Inst.
ocean. 42:125-198 '60. (MIRA 13:10)
(Okhotsk, Sea of--Water--Composition)

BRUYEVICH, S.V.

Hydrochemical study of the White Sea. Trudy Inst. okean. 42:199-
254 '60. (MIRA 13:10)
(White Sea--Water--Composition)

~~BRUYEVICH, S.V.~~

Water and salt balance of the Black Sea. Trudy Inst. okean. 42:255-
272 '60. (MIRA 13:10)

(Black Sea--Salinity)

ANAPINA, O. V., RUDOL'F, L. I., KAMENETS, A. F., ZELENSKY, N. M.,
 ZAVAY, A. V., KATINA, H. V., KANONIK, A. K. and URETSKY, M. M.,
 All from the Institute of Oceanology, Academy of Sciences USSR -
 "The bottom relief of the Pacific Ocean and its cartographic
 representation" (Section VII.A)
 ANTONYEV, A. P., Institute of Zoology, Academy of Sciences USSR -
 "New data on the Antarctic and the problem of their
 biotic distribution in the Southern Ocean" (Section III.C)
 ARNDT, R. P., and SHCHERBAKOV, A. A., Institute of Oceanology -
 "The tectonic connections of the Pacific Ocean" (Section VII.C.1)
 ARTHUR, O. D. (Name blurred, but may be ARTHUR, O. D.)
 Institute of Geology of Ore Deposits, Petrography, Mineralogy,
 and Geochemistry (Title of paper is blurred; following is
 approximate title): "Suboceanic bathymetric discontinuity [sic] layer
 and petrographic data" (Section VII.C)
 BAKHAROV, L. M., Institute of Earth Physics Acad. O. N. Bakhart -
 "The character of stresses and ruptures in the earthquake focus of the
 Pacific Ocean" (Section VII.C.2)
 BAKHAROV, V. V., Institute of Oceanology, Acad. of Sciences USSR -
 "The bathymetric bathymetry of the Pacific Ocean" (Section VII.C)
 BAKHAROV, A. M., Yakutsk State University (Section VII.B)
 in the sector of the Far East (Section VII.B)
 BAKHAROV, K. V., Institute of Oceanology - "On the transformation
 of the platon of the Pacific drift and in the adjacent waters" (Section VII.C)
 BAKHAROV, V. V., and ANDRUS, Ye. M., Institute of Earth Physics Acad.
 O. N. Bakhart - "Stresses and age of the abyssal depression of
 the sea of Japan" (Section VII.C.2)
 BAKHAROV, L. M., Institute of Oceanology - "Accumulations of squid
 eggs in the Pacific Ocean" (Section VII.C)
 BAKHAROV, P. M., Institute of Oceanology - "On the question of
 the geological history of the Okhotsk Sea" (Section VII.C)
 BAKHAROV, P. M., and KAMENETS, A. P., PERLIN, V. P., and SHCHERBAKOV,
 A. G., Institute of Oceanology - "Recent sediments of the Pacific"
 (Section VII.C.1)
 BAKHAROV, Ye. A., and VIKHOREV, M. Ye., Institute of Oceanology -
 "Some specific features in the geographical distribution of abyssal
 pelagic animals (Amphipoda)" (Section III.C)
 BAKHAROV, A. K., Institute of Oceanology - "New charts of coralline lines
 and the character of tidal phenomena in the Pacific Ocean" (Section
 VII.B)
 BAKHAROV, V. O., PERLIN, K. V., and VIKHOREV, M. Ye., Institute
 of Oceanology - "The distribution of the coprolite biomass in the
 Pacific Ocean" (Section III.C)
 BAKHAROV, O. K., Institute of Geology, Exploitation of Coal-bearing
 Materials - "The diastrophic changes in bottom sediments from
 the central part of the Pacific" (Section VII.C.1)
 BAKHAROV, V. K., Institute of Geology - "Sedimentation and the regular-
 ities in the distribution of mineral resources in the geographical
 basis of the Tertiary period in the area of Kamchatka and the
 Sakhalin Island" (Section VII.C)
 BAKHAROV, V. K., and KAMENETS, Ye. B., Institute of Oceanology -
 "Some chemical features of sediments and ground solutions permeating
 the Pacific Ocean" (Section VII.C)
 BAKHAROV, V. K., Institute of Oceanology - "A study of equatorial
 currents in the western Pacific" (Section VII.B)
 BAKHAROV, V. K., and GABRIELIDZE, V. B., Institute of Oceanology -
 "The formation of air masses in the northern part of the Pacific
 Ocean" (Section VII.A)
 BAKHAROV, V. K., Institute of Oceanology - "The regions of formation
 and transition sources of anti-cyclones in the northern part of the
 Pacific Ocean" (Section VII.A)

S/169/62/000/005/062/093
D228/D307

AUTHOR: Bruyevich, S. V.

TITLE: The present bases of the electrometric and the colorimetric determination of the pH of sea water

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 8, abstract 5V53 (Tr. In-ta okeanol. AN SSSR, 47, 1961, 139-143)

TEXT: Work has recently been carried out with the aim of determining as accurately as possible the pH value of some basic standard solutions. This provided the possibility of rejecting the calomel electrode potentials as a basis for estimating the pH and of taking as such a basis the pH of one or several reliably established standard solutions. The British and American standards are described; the former is preferred, since the American standard takes the pH values of basic solutions that have been obtained experimentally, whereas the British standard takes as the primary standard a 0.05 molar solution of potassium biphthalate

Card 1/2

The present bases ...

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and its pH at 15° according to a determination that is precisely equal to 4. A description is given of the change to the accepted pH values of sea water, expressable in Serensen units. The magnitude of the difference between the contemporary pH values (pH) and the Serensen units may be taken as equalling 0.028 or 0.03 in round numbers. 10 references. [Abstracter's note: Complete translation.]

Card 2/2

BRUYEVICH, S.V.; LYUTSAREV, S.V.

Concentration of carbon dioxide in the atmosphere over the Pacific
and Indian Oceans and in the Black Sea region. Dokl. AN SSSR 136
no.2:405-407 '61. (MIRA 14:1)

1. Institut okeanologii Akademii nauk SSSR. Predstavleno akademikom
A.P. Vinogradovym.
(Carbon dioxide) (Ocean)

BRUYEVICH, S.V., prof., otv. red.; KABANOV, V.V.; LOSKUTOVA, I.P.,
red.; MAKUNI, Ye.V., tekhn.red.

[Conversion tables of the results of hydrochemical analyses]
Tablitsy perescheta rezul'tatov gidrokhimicheskikh analizov.
Moskva, Izd-vo Akad. nauk SSSR, 1962. 82 p. (MIRA 15:11)

1. Akademiya nauk SSSR. Okeanograficheskaya komissiya.
(Water—Analysis)

BRUYEVICH, S.V.

Study of the chemical stratification in the bottom layer and the
water mass of the Black Sea. Trudy Inst. okean. 54:31-38 '62.
(MIRA 16:6)

(Black Sea—Sea water—Analysis)

BRUYEVICH, S.V.

Review of articles on marine chemistry published in the collection
"Oceanography"; lectures delivered at the International Oceanographic
Congress in 1959 [in English]. Okeanologiya 2 no.4:752-753 '62.
(MIRA 15:7)

(Seawater--Composition)

BRUYEVICH, S.V.

Rates of mineralization of suspended organic matter in the low
latitudes of the Pacific Ocean in its presedimentation stage.
Geokhimiia no.3:329-332 Mr '63. (MIRA 16:9)

1. Institute of Oceanology, Academy of Sciences, U.S.S.R., Moscow.
(Pacific Ocean—Ore deposits)
(Pacific Ocean—Organic matter)

BRUYEVICH, S.V., prof.

Chemistry of the sea; conference in Moscow. Vest. AN SSSR
34 no.8:102 Ag '64. (MIRA 17:12)

IVANENKOV, Vladimir Nikolayevich ; BRUYEVICH, S.V., prof., otv.
red.; VOLYNETS, M.P., red.

[Hydrochemistry of the Bering Sea] Gidrokhiimiia Beringova
moria. Moskva, Izd-vo "Nauka," 1964. 136 p. (MIRA 17:6)

L 13772-65 EWT(1)/FCC Pa-4 AFETR GW

ACCESSION NR: AT4045850

S/2566/64/067/000/0007/0040

AUTHOR: Lyutsarev, S.V., Bruevich, S.V.

TITLE: Carbon dioxide in the atmosphere over the Pacific, the Indian Ocean, and the northern coastal region of the Black Sea

SOURCE: AN SSSR. Institut okeanologii. Trudy*, v. 67, 1964. Khimiya vod i osadkov marey i okeanov. (Chemistry of the waters and deposits of the seas and oceans), 7-40

TOPIC TAGS: atmospheric carbon dioxide, climatology

ABSTRACT: In a review of studies on atmospheric carbon dioxide, culminating in the Soviet studies of 1958-61 in the Northern Pacific, the Indian Ocean, and the northern coastal region of the Black Sea, the authors present tables of extensive CO₂ content data collected by the expedition ship "Vityaz" and by a joint expedition of the Institut okeanologii AN SSSR (Institute of Oceanology) and the Radiyevy'y institut AN SSSR (Radium Institute), and discuss the behavior of carbon dioxide in the atmosphere and its role as a climatic factor. Rubber balloons and glass bottles filled with concentrated sodium sulfate solution were used for air sampling (at 4 m above sea level), and assemblies of different types, of which Lyutserov's portable unit proved most suitable, were used for the determination of

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L 13772-65
ACCESSION NR: AT4045850

CO₂. The unit allowed recirculation of the sampled air through the absorber, thus achieving an accuracy of within 2%. The CO₂ values, ranging from 302 to 412 parts per million in volume, indicate: 1. a distinct zonal CO₂ distribution in the Pacific, with a CO₂ content which is lower in the temperate latitudes, greater in the northern tropical region, and tends to decrease in the equatorial region; 2. greater CO₂ content in the northern tropical zone of the Indian Ocean than in the southern tropical zone; and 3. an average CO₂ content of 328 ppm in the Black Sea region which roughly coincides with that for 50-60° N latitude in the Pacific, and that for Scandinavia and Finland. Orig. art. has: 8 tables, 3 maps, 1 figure and 3 formulas.

ASSOCIATION: Institut okeanologii AN SSSR (Institute of Oceanology, AN SSSR).

SUBMITTED: 00

ENCL: 00

SUB CODE: ES

NO REF SOV: 006

OTHER: 015

Card 2/2

TAMONT'YEV, V.P.; BRUYEVICH, S.V.

Strontium in the waters of the Pacific and Indian Oceans and the
Black Sea. Trudy Inst. okean. 67:41-55 '64.

(MIRA 17:12)

BRUYEVICH, S.V.; ZAYTSEVA, Ye.D.

Biogenic elements in the interstitial waters of the Pacific Ocean.
Trudy Inst. okean. 67:56-91 '64. (MIRA 17:12)

BRUYEVICH, S.V.

Methods of determining chlorinity (salinity) of seawater. Trudy Inst.
ocean. 67:177-215 '64. (MIRA 17:12)

BRUYEVICH, S.V.

Salt composition of the water of the world ocean and its
changes in time. Okeanologia 5 no.2:193-205 '65.

(MIRA 18:6)

1. Institut okeanologii AN SSSR.

BRUYEVICH, S.V.

"Hydrochemistry of the Bering Sea" by V.N. Ivanenkov. Reviewed
by S.V. Bruevich. Okeanologia 5 no.2:380-381 '65.

(MIRA 18:6)

YEREMENKO, V.N.; YEREMENKO, O.M.; BRUYEVICH, T.P.

Thermodynamic properties of liquid solutions in systems: lead -- bismuth and cadmium -- lead. Ukr.khim.zhur.17 no.5:658-677 '51.

(MIRA 9:9)

1. Institut chernoy metallurgii AN USSR.
(Lead-bismuth alloys) (Cadmium-lead alloys)

BRUYEVICH, T. S.

OVSYANNIKOV, L. M.; BRUYEVICH, T. S.

~~Two cases of deep blastomycosis of the skin. Vest. vener.,~~
Moskva no. 5:43-44 Sept-Oct 1951. (CJML 21:1)

1. Of the Department of Dermatology (Head — Prof. L. N. Mashkilleyson), Central Skin-Venereological Institute (Director — Candidate Medical Sciences N. M. Turanov).

BRUYEVICH, T.S.

~~CONFIDENTIAL~~

Occupational diseases of the hands of poultry pickers. Gig.1 san.
no.5:52 My '54. (MIRA 7:5)

1. Iz Instituta gigiyeny truda i professional'nykh Akademii meditsinskikh
nauk SSSR. (Poultry, Dressing of) (Occupational diseases)

BRUYEVICH, T.S.

BRUYEVICH, T.S. (Moskva)

Changes in the innervation of the skin in patients with occupational
eczemas. Gig.truda i prof.zab. 1 no.6:43-48 N-D '57. (MIRA 11:2)

1. Institut gigiyeny truda i profsabolevaniy AMN SSSR.
(ECZEMA) (SKIN-INNervation)

BRUYEVICH, T.S. (Moskva)

Occupational dermatoses caused by products of the pyrolysis of petroleum and the possibilities of their degeneration into skin cancer. Gig.truda i prof.zab. 6 no.6:38-43 Je '62. (MIRA 15:12)

1. Institut gigiyeny truda i professional'nykh zabolevaniy
AMN SSSR.

(SKIN--CANCER)

(OCCUPATIONAL DISEASES)

(PETROLEUM PRODUCTS-TOXICOLOGY)

BRUYEVICH, T.S., Cand Med Sci--(diss) "Functional and morphological changes in the nervous ^{8/}ap~~p~~aratus of the skin in patients with occupational oozemas." Mos, 1958. 13 pp (Inst of Hygiene ~~de~~ Labor) and Occupational Diseases of the Acad Med Sci USSR), (K1,26-58,115)

- 132 -

BRUYEVICH, V.S.

Occupational dermatoses in medical personnel. Vestn. AMN SSSR, 1963, no. 5:30-36. 165.

[S. 1, 165]

1. Institut gigiyeny труда i professional'noy zashchity
AMN SSSR, Moskva. Submitted December 5, 1963.

DOLGOV, A.P.; BRUYEVICH, T.S.; ANTON'YEV, A.A. (Moskva)

First All-Union Symposium on Urgent Problems concerning Occupational Dermatology. Gig. truda i pref. zab. 7 no.1:56-58 Ja'63
(MIRA 16:12)

BRUYEVICH, T.S., kand. med. nauk

Protective pastes and the role of the barrier function of
the skin in evaluation of their effectiveness. Vest. dermat.
i ven. 37 no.6:30-35 Je '63. (MIRA 17:6)

1. Dermatologicheskoye otdeleniye (zav. - prof. A.P. Dolgov)
Instituta gigiyeny trudy i professional'nykh zabolevaniy (dir.
- deystvitel'nyy chlen AMN SSSR prof. A.D. Letavet) AMN SSSR. -

DOLGOV, A.P., prof., red.; RABEN , A.S., doktor med. nauk, red.;
ANTON'YEV, A.A., dots., red.; BRUYEVICH, T.S., kand. med.
nauk, red.; LETAVET, A.A., prof., red.; RAKHMANOV, V.A.,
prof., red.; STUDNITSIN, A.A., prof., red.

[Current problems of occupational dermatology] Aktual'nye
voprosy professional'noi dermatologii. Moskva, Meditsina,
1965. 246 p. (MIRA 18:4)

1. Deystvitel'nyy chlen AMN SSSR (for Letavet). 2. Chlen-
korrespondent AMN SSSR (for Rakhmanov). 3. Dermatologicheskoye
otdeleniye Instituta gigiyeny truda i profzabolevaniy AMN SSSR
(for Dolgov, Anton'yev, Bruyevich, Raben).

BRUYEVICH, T.S., kand. med. nauk; SADKOVSKAYA, N.I., kand. med. nauk

Occupational dermatoses in workers of asbestos-slate, reinforced concrete and ceramic enterprises. Vest. dermat. i ven. 38 no. 12: 9-14 D '64. (MIRA 18:6)

1. Dermatologicheskoye otdeleniye (zav.- prof. A.P. Dolgov)
Instituta gigiyeny truda i professional'nykh zabolevaniy (dir.-
deystvitel'nyy chlen AMN SSSR prof. A.A. Letavet) AMN SSSR, Moskva.

BRUYEVICH, T.S.; SHTEYNBERG, G.B. (Moskva)

Causes of occupational dermatoses developing in workers employed in caffeine production. Gig. truda i prof. zab. 6
no.12:13-17 D'62. (MIRA 16:7)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN
SSSR, Tsentral'nyy institut usovershenstvovaniya vrachey.
(SKIN-DISEASES) (CAFFEINE--PHYSIOLOGICAL EFFECT)

BRUYEVICH, V.; KOZLOVA, N.; SHAPOVALOV, V.

Industrial conferences and constructive initiative of the masses.
Sots.trud 4 no.6:105-110 Je '59. (MIRA 12:8)
(Employees' representation in management)

PROFESSOR V.N.

PHASE I BOOK EXPLOITATION

SOV/4924

Avrasin, Ya.D., ed., Candidate of Technical Sciences

Steklotekstolity i drugiye konstruksionnyye plastiki; sbornik statey (Glass Textolites and Other Construction Plastics; Collection of Articles) Moscow, Oborongiz, 1960. 167 p. Errata slip inserted. 7,050 copies printed.

Ed. of Publishing House: I.A. Suvorova; Tech. Ed.: N.A. Pukhlikova; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This collection of articles is intended for personnel of plants, design offices, and scientific research institutes.

COVERAGE: The collection of articles contains experimental data on glass textolites and structural plastics. The papers describe the physical, mechanical, and electric insulating properties of laminated and compounded plastics under normal and high temperatures. Topics include the technological methods of manufacturing large-size articles, glass cloth honeycomb fillers used in electronics, the mechanical characteristics of some of the laminated plastics with respect to bolted or riveted joints, and the dielectric properties of glass textolites used in

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Glass Textolites (Cont.)

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the centimeter wave range. The changeability of physical, mechanical, and electric insulating properties of glass textolites, pressed plastics of fibrous structure (AG-4, KMK-212, KMS-9), and powdery plastics (FAK-4, and B4-70) under the effect of temperature is also covered. No personalities are mentioned. There are no references.

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Glass Textolites (Cont.)

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Zakharov, V.A., G.N. Nadezhina, and V.I. Sakharova. Changeability of the Physical, Mechanical, and Electric Insulating Properties of Some Molding Materials Under the Effect of Temperature and Other Factors (Moisture, Fuel, and Oil) 139

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89343

S/191/61/000/001/004/015

B101/B205

15.2120

AUTHORS: Kiselev, B. A., Bruyevich, V. N.

TITLE: VFT and VFT-S - heat-resistant glass textolites

PERIODICAL: Plasticheskiye massy, no. 1, 1961, 12-18

TEXT: A study has been made of the manufacture of heat-resistant glass textolites (resin-impregnated laminated glass fabrics). KACT (KAST) glass textolite, developed at the NIIPM (Scientific Research Institute of Plastics) under the supervision of G. S. Petrov on the basis of БФ (BF) phenol-formaldehyde resin modified with polyvinyl butyral, is not able to withstand temperatures above 150°C. The authors have now developed several glass textolites on the basis of phenol-formaldehyde resin with polyvinyl acetal and alkoxy silane. [Abstracter's note: No data available on composition and synthesis]. The textolite with a filler of alkali-free glass fabric of the type П(T), common weave, was designated БФТ (VFT), and that with glass fabric of the type АСТТб (ASTTb), satine weave, was designated БФТ-С (VFT-S). The following data are presented on the synthesis of glass textolite: dissolution of the resin in alcohol + acetone or

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VFT and VFT-S - heat-resistant...

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alcohol + toluene. (As the resin is partly precipitated below 18°C, the solution was heated to 20-30°C before the glass fabric was impregnated). Impregnation and drying of the glass fabric, cutting to size for pressing, pressing at 25-50 kg/cm² and 150-170°C. To prevent thin VFT-S sheets from cracking, pressure is to be slowly raised at 160-180°C, followed by heating at 160-180°C for three hours. Application of a pressure of 3 kg/cm² or, in vacuo, of 0.6-0.7 kg/cm² is also possible. The mechanical properties of the products are listed in Table 2. According to data by I. T. Shvetsov, VFT-S withstands a stress of 600-800 kg/cm² and more than 19,000,000 loading cycles; at 200°C, it withstands the same number of cycles with half the stress. Fatigue tests are illustrated in Fig.8, and the statistical endurance of various glass textolites, determined by G. N. Finogenov, is presented in Fig.9. Fig.11 shows endurance as a function of temperature. Thermophysical data (determined under the supervision of Z. P. Ablekova): resistivity to heat according to Martens: 240°C; coefficient of thermal conductivity: 0.25 kcal/m.°C.hr; coefficient of thermal diffusivity at 20°C: $9.1 \cdot 10^{-4}$ m²/hr; at 150°C: $7.9 \cdot 10^{-4}$ m²/hr; coefficient of heat capacity at 20-150°C: 0.23-0.25 kcal.kg.°C; coefficient of linear expansion at 30-100°C:

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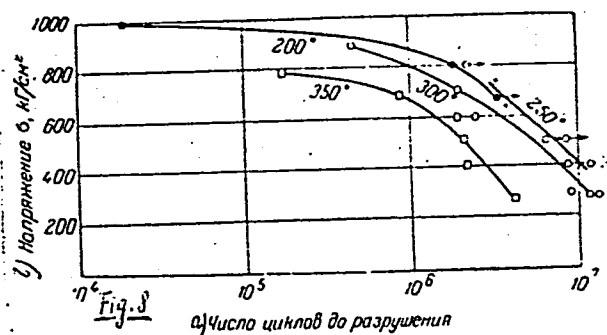
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VFT and VFT-S - heat-resistant...

$7.9-8.7 \cdot 10^{-6}$; at $190-250^{\circ}\text{C}$: $1.2 \cdot 10^{-6}$. After 30 days, VFT-S absorbed about 5% kerosene and 4.5% H_2O . The dielectric properties are shown in Fig.14.

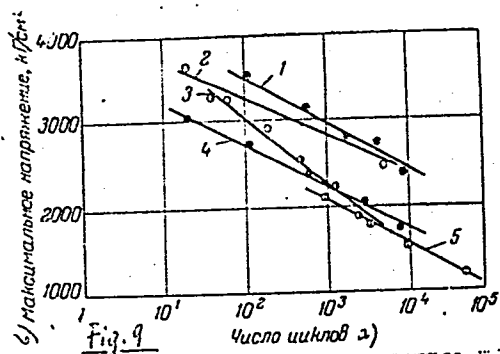
M. V. Sobolevskiy and V. V. Bodrova are mentioned. There are 14 figures and 7 tables.

Legend to Fig.8: a) Number of loading cycles until destruction; b) stress;
o → specimen remained intact.



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VFT and VFT-S - heat-resistant...

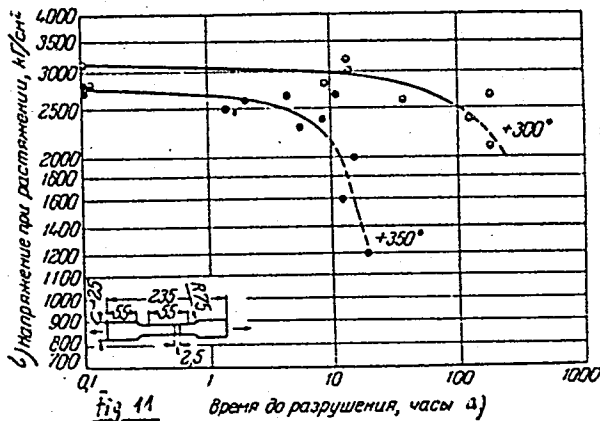


Legend to Fig. 9: a) Number of cycles; b) maximum stress:
 1: EF32-301 (EF32-301); 2: EF32-301;
 3: CT911-C (ST911-S); 4: VFT-S;
 5: KAST-V.

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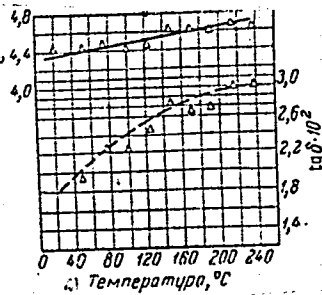
Legend to Fig. 11: a) Time until destruction, hr; b) tensile force.

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VFT and VFT-S - heat



Legend to Fig.14:
a) temperature.

Table 2

Свойства

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| | | |
|----|---|-----|
| 9 | Предел прочности, кг/см^2 | ... |
| 10 | при сжатии, ... | ... |
| 11 | при растяжении, ... | ... |
| 12 | при скалывании вдоль слоев, ... | ... |
| 13 | при статическом изгибе, ... | ... |
| 14 | при срезе в направлении плоскости листа, ... | ... |
| 15 | по основе, ... | ... |
| 16 | по утку, ... | ... |
| 17 | при срезе в направлении, перпендикулярном плоскости листа, ... | ... |
| 18 | Модуль упругости при растяжении, кг/см^2 , ... | ... |
| 19 | Предел пропорциональности, кг/см^2 , ... | ... |
| 20 | Модуль сдвига, кг/см^2 , ... | ... |
| 21 | по основе, ... | ... |
| 22 | по утку, ... | ... |
| 23 | Удельная ударная вязкость, $\text{кг}\cdot\text{см/см}^2$, ... | ... |
| 24 | Коэффициент Пуассона | ... |
| 25 | по основе, ... | ... |
| 26 | по утку, ... | ... |
| 27 | Твердость по Бринеллю, кг/см^2 , ... | ... |

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VFT and VFT-S - heat-resistant...

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| Условия | | 200 часов при 200° | | при комнатной температуре | | 5 часов | |
|-----------|-----------|--------------------|-----------|---------------------------|-----------|-----------|-----------|
| 7 | 8 | 7 | 8 | 7 | 8 | 7 | 8 |
| ВФТ | ВФТ-С | ВФТ | ВФТ-С | ВФТ | ВФТ-С | ВФТ | ВФТ |
| 1345° | 1715° | 1185° | 1290° | 1185° | 1290° | 1110° | 1110° |
| 1265—1495 | 1620—1885 | 1130—1255 | 1200—1415 | 1130—1255 | 1200—1415 | 960—1235 | 960—1235 |
| 3285 | 4000 | 3030 | 3060 | 3030 | 3060 | 2560 | 2560 |
| 2800—3600 | 3650—4500 | 2860—3125 | 2040—3565 | 2860—3125 | 2040—3565 | 2525—2860 | 2525—2860 |
| 120 | 190 | — | 50 | — | 50 | 40 | 40 |
| 115—125 | 160—210 | — | 35—55 | — | 35—55 | 35—50 | 35—50 |
| 2825 | 3375 | 1467 | 2058 | 1467 | 2058 | 970 | 970 |
| 2475—3230 | 2890—4370 | 1295—1786 | 1815—2440 | 1295—1786 | 1815—2440 | 875—1060 | 875—1060 |
| 935 | 860 | 860 | — | 860 | — | 800 | 800 |
| 970 | 965 | — | — | — | — | — | — |
| 850 | 890 | — | — | — | — | — | — |
| 180000 | 213000 | 113800 | 147000 | 113800 | 147000 | 87000 | 87000 |
| — | 2000 | 730 | 1050 | 730 | 1050 | — | — |
| — | 34000 | — | — | — | — | — | — |
| — | 25800 | — | — | — | — | — | — |
| 90 | 105 | 147 | 156 | 147 | 156 | 150 | 150 |
| 80—105 | 85—115 | 133—160 | 140—168 | 133—160 | 140—168 | 140—160 | 140—160 |
| 0,15 | 0,15 | — | — | — | — | — | — |
| 0,11 | 0,09 | — | — | — | — | — | — |
| — | 32 | — | — | — | — | — | — |

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VFT and VFT-S - heat-resistant...

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| ИСПЫТАНИЯ | при 250° | | 5 часов при 300° | | 5 часов при 300° | |
|-----------|-----------|-----------|------------------|-----------|------------------|-----------|
| | ВФТ-С | ВФТ | ВФТ-С | ВФТ | ВФТ-С | ВФТ |
| 1250° | 845° | 910° | 340° | 285-465 | 2090 | 1840-2640 |
| 1010-1560 | 750-840 | 645-1100 | 1750 | 1645-1820 | 740 | 695-1080 |
| 3140 | 2515 | 3040 | 11 | 8-15 | 780 | |
| 2295-3600 | 2185-2665 | 2710-3320 | 35 | 33-38 | 1080 | |
| 45 | 28 | 35 | 1080 | 965-1180 | | |
| 41-50 | 24-36 | 33-38 | 730 | 720 | 540 | 560 |
| 1030 | 975 | 1080 | 102000 | 1100 | 86000 | 700 |
| 985-1065 | 830-1140 | 965-1180 | 130 | 85 | 20 | 15-25 |
| 785 | 730 | 720 | 110-150 | 75-95 | | |
| 129400 | 102000 | 1100 | | | | |
| 1100 | | | | | | |
| 120 | 130 | 85 | | | | |
| 105-130 | 110-150 | 75-95 | | | | |
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VFT and VFT-S - heat-resistant...

89343
S/191/61/000/001/004/015
B101/B205

Legend to Table 2. 1: Test conditions; 2: room temperature; 3: 200 hr at 200°C; 4: 5 hr at 250°C; 5: 5 hr at 300°C; 6: 5 hr at 350°C; 7: VFT; 8: VFT-S; 9: limit strength, kg/cm²; 10: compressive strength; 11: tensile strength; 12: strength with cleaving along layers; 13: bending strength; 14: resistance to shearing parallel to sheet; 15: along warp; 16: along filling; 17: perpendicular to sheet; 18: modulus of elasticity; 19: limits of proportionality; 20: modulus of rigidity; 21: along warp; 22: along filling; 23: resilience, kg.cm./cm²; 24: Poisson's ratio; 25: along warp; 26: along filling; 27: Brinell hardness.

Card 8/8

KISELEV, B.A.; BRUYEVICH, V.N..

Furfurole binder FN and glass reinforced plastics based on it.
Plast. massy bo.11:41-46 '63. (MIRA 16:12)

BATIN, N.A.; SERGEYEV, Ye.Ye.; BRUYEVICH, Yu.A.

Use of low-grade lumber. Der. prom. 14 no.8:18-20 Ag '65.

(MIRA 18:10)

1. Belorusskiy tekhnologicheskii institut im. S.M. Kirova.

BRUYLE, Ye. S.

4

✓ Solubility isotherm at 25° of the system lead oxide-
Seignette's salt-water. N. S. Dombrovskaya and E. S.
Brulle. Invest. Sektora Fiz.-Khim. Anal., Inst. Obshch. i
Neorg. Khim., Akad. Nauk S.S.S.R. 26, 224-8 (1985).
Detn. of soly. in $PbO-KNaC_2H_3O_2-H_2O$ by the method of
residues showed that the complex formed in water solns.
consists of $6PbO \cdot 3KNaC_2H_3O_2 \cdot (H_2O)_x$ (I). The soln. isotherm
corresponding to I has the form of a bent line. As a conse-
quence with isothermal evapn. of solns. the quant. relation-
ship of the pptg. phases does not remain const. but varies
continuously between wide limits. Addn. of small amts. of
NaOH to a satd. soln. of I yielded crystals of $PbO \cdot KNaC_2H_3O_2$.
V. N. Bednarski

11/8/85

Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo
mashinostroyeniya.

5(4)

AUTHORS:

Bruyle, Ye. S., Dombrovskaya, N. S. SOV/78-4-5-36/46

TITLE:

The Solubility Diagram of the Three-Component System
 $\text{KNaC}_4\text{H}_4\text{O}_6\text{-NaOH-H}_2\text{O}$ at 25° (Diagramma rastvorimosti
 troynoy sistemy $\text{KNaC}_4\text{H}_4\text{O}_6\text{-NaOH-H}_2\text{O}$ pri 25°)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4: Nr 5,
 pp 1165-1169 (USSR)

ABSTRACT:

Solubility in the three-component system $\text{KNaC}_4\text{H}_4\text{O}_6\text{-NaOH-H}_2\text{O}$
 was investigated. The isothermal line for solubility, the
 specific weight, and the refraction indices of the system are
 given in a table. As initial materials $\text{KNaC}_4\text{H}_4\text{O}_6\text{-4H}_2\text{O}$
 (Seignette salt) was used per analysis. The investigation
 of the isothermal lines was carried out in the micro-
 -thermostat TS-15 at $25 \pm 0.05^\circ$. The solubility diagram of this
 system is shown by figure 1. It was found that the solubility
 curve consists of three branches. The first of them
 corresponds to the crystallization of $\text{KNaC}_4\text{H}_4\text{O}_6\text{-4H}_2\text{O}$. Figure
 2 (a - g) shows the microphotographs of the crystals of the

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The Solubility Diagram of the Three-Component System SOV/78-4-5-36/46
 $\text{KNaC}_4\text{H}_4\text{O}_6\text{-NaOH-H}_2\text{O}$ at 25°

separated solid phase $\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$ (a), $\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 3\text{H}_2\text{O}$ (b), $2\text{NaOH} \cdot 3\text{KNaC}_4\text{H}_4\text{O}_6$ (g) and the solid phase of the point P (u). It was found that an increase of NaOH-concentration up to 11% by weight a dehydration of $\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$ up to $\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 3\text{H}_2\text{O}$ occurs. At a concentration of 13 % by weight NaOH the compound $2\text{NaOH} \cdot 3\text{KNaC}_4\text{H}_4\text{O}_6$ is formed. The solubility of the compound $\text{KNaC}_4\text{H}_4\text{O}_6$ was investigated up to 32 % by weight NaOH. At more than 32 % by weight NaOH, the solution becomes viscous, so that separation of the solid phase is rendered more difficult. Figure 3 shows the curves of the specific weight and the refraction indices of the system $\text{KNaC}_4\text{H}_4\text{O}_6\text{-NaOH-H}_2\text{O}$ at 25° . Thermal stability in the compounds $\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$ and $2\text{NaOH} \cdot 3\text{KNaC}_4\text{H}_4\text{O}_6$ was investigated. The thermograms are shown in figures 4 and 5. The thermograms show that at 25° , 55° , 61° , 89° and 112° a complete

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The Solubility Diagram of the Three-Component System $\text{KNaC}_4\text{H}_4\text{O}_6\text{-NaOH-H}_2\text{O}$ at 25° SOV/78-4-5-36/46

dehydration of the Seignette salt occurs in the compound.

At temperatures higher than 220° the compound carbonizes partly. The thermogram of the compound $2\text{NaOH} \cdot 3\text{KNaC}_4\text{H}_4\text{O}_6$ shows (Fig 5) that separation of the hygroscopic water takes place at 117°C , and that partial carbonization occurs at temperatures above 253° . There are 5 figures, 1 table, and 3 references, 1 of which is Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya (All-Union Scientific Research- and Design Institute for Chemical Machines Construction)

SUBMITTED: December 28, 1957

Card 3/3

5(2)

AUTHORS: Bruyle, Ye. S., Dombrovskaya, N. S.

SOV/78-4-9-28/44

TITLE: The Solubility Diagram of the Quaternary System $\text{PbO} - \text{KNaC}_4\text{H}_4\text{O}_6 - \text{NaOH} - \text{H}_2\text{O}$ at 25°

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 9, pp 2091-2099 (USSR)

ABSTRACT: In the production and use of lead-Seignette electrolytes for electrolytic lead coating disturbing sediments occur. The authors investigated the composition of these precipitates and found the area of unsaturated solutions in which these precipitates cannot occur. The ternary systems $\text{PbO} - \text{KNaC}_4\text{H}_4\text{O}_6 - \text{H}_2\text{O}$, and $\text{KNaC}_4\text{H}_4\text{O}_6 - \text{NaOH} - \text{H}_2\text{O}$ had already been examined by the authors on an earlier occasion (Refs 6, 7). The present paper briefly reviews those results and then reports of the investigation of the ternary system $\text{PbO} - \text{NaOH} - \text{H}_2\text{O}$ (Table 1, Fig 1) as well as the quaternary system mentioned in the title. The solid PbO phase of the ternary system was examined electronographically by K. V. Shishokina (Table 2). In the case of NaOH concentrations between 47.06 and 50.86 % by weight a colorless crystalline precipitate was

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The Solubility Diagram of the Quaternary System
 $\text{PbO} - \text{KNaC}_4\text{H}_4\text{O}_6 - \text{NaOH} - \text{H}_2\text{O}$ at 25°

SOV/78-4-9-28/44

observed (Fig 2a). An analysis showed that it was $\text{Na}[\text{Pb}(\text{OH})_3]$.

The results of the investigation of the quaternary system are to be found in table 3 and figure 3. Six crystallization ranges were found: I. $\text{PbO} \cdot \text{KNaC}_4\text{H}_4\text{O}_6$, II. $2\text{NaOH} \cdot 3\text{KNaC}_4\text{H}_4\text{O}_6$, III. $\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 3\text{H}_2\text{O}$, IV. $\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$, V. $3\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 3\text{H}_2\text{O}$, and VI. PbO . Compound I was investigated crystalloptically by M. N. Lyashenko (Fig 2b) and radiographically by V. G. Kuznetsov and Z. V. Popova (Fig 4, Table 3). Furthermore, the thermogram was made (Fig 5). Table 4 lists the solubility isotherms of the quaternary system at 25° . By means of the solubility diagram plotted according to E. Jänecke (Fig 3) the area of the unsaturated solutions in which no precipitates disturbing the electrolysis occur can be determined. There are 5 figures, 4 tables, and 9 references, 7 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya (All-Union Scientific Research and Designing Institute of Chemical Machine Building)

SUBMITTED: May 7, 1958

Card 2/2

BRUYLE, YE. S., CAND CHEM SCI, "PHYSICO-CHEMICAL INVESTIGATION OF LEAD-ROCHELLE SALT ELECTROLYTES. ISOTHERM OF SOLUBILITY AT 25⁰ OF THE QUADRUPL SYSTEM." MOSCOW, 1960. (ACAD SCI USSR, INST OF GENERAL AND INORGANIC CHEM IM N. S. KURNAKOV). (KL, 3-61, 200).

18 8300

25071

S/080/60/033/010/025/029

D216/D306

AUTHORS: Bruyle, Ye.S., and Dombrovskaya, N.S.

TITLE: A study of the solubility rates of titanium alloys in sulphuric and hydrochloric acid solutions of different concentrations

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960,
2360 - 2362

TEXT: Titanium has been used as an alloying and deoxidizing element in steel. Recently the wider use both of the pure metal and of alloys has taken place in the construction of chemical plants, in defence, the aircraft industry, etc. The most active solvent of titanium and its alloys is hydrofluoric acid and its mixtures with sulphuric and nitric acids since the protective surface oxide film is soluble in HF. Titanium and its alloys dissolve in H_2SO_4 and

HCl solutions on heating. In the case of HCl corrosion studies were made to 20 %; it was found that the corrosion rate increases with

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S/080/60/033/010/025/029

D216/D306

A study of the solubility ...

the acid concentration. To determine the solubility effects of HCl and H_2SO_4 of different concentrations on Ti and its alloys and also to find the best solvent an alloy of titanium containing 5.7 % of Al was prepared and used for this work. 1 g. of this alloy was placed in a 200 ml. beaker and treated with 100 mls. of acid solutions (5, 10, 15, 20, 25, 30 ... % by wt.). The volume of the solution was kept constant by addition of water. To determine the time effect (30, 60, 90 ... min.) the leaching was interrupted, undissolved shavings were filtered off through a sintered glass crucible, washed with water, dried and weighed. The solubility data is given in tabulated form. The data show that the solubility rate of the Ti-Al alloy in a H_2SO_4 solution of concentration of 5, 10, 15, 20, 25, 30, 35, 40, 45² and 50 % by wt. increases up to 40 % by wt. concentration and the rate is maximum at 120 minutes. With a further increase in concentration the solubility rate decreases and is equal to 150 minutes at a H_2SO_4 concentration of 45.0 % by wt. and to 240 minutes at 50.0 % by wt. In the case of HCl the maximum ra-

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S/080/60/033/010/025/029

D216/D306

A study of the solubility ...

te is at 30.0 % by wt. concentration and is equal to 90 minutes, while an increase in concentration decreases the solubility rate to 120 minutes. From this data the conclusion is that the maximum solubilities of the alloy are obtained with 30.0 % by wt. of HCl and 40.0 % by wt. of H_2SO_4 . There are 2 figures, 2 tables and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: M. Codell, G. Norwitz, I. Mikula, *Analyt. Chem.*, 9, 1379, 1955; G. Norwitz, M. Codell, *Metallurgia*, 57, 347, 261-270, 1958; L.B. Golden, I.R. Lane, W.L. Achermen, *Ind. Eng. Ch.*, 44, 1952

ASSOCIATION: Vsesoyvznyy nauchno-issledovatel'skiy i konstruktor-skiy institut khimicheskogo mashinostroyeniya (All-Union Scientific Research and Constructional Institute of Chemical Engineering)

SUBMITTED: April 8, 1960

Card 3/3

L 13576-63

EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3000190

S/0080/63/036/004/0910/0912

AUTHOR: Bruyle, Ye. S.; Dombrovskaya, N. S.

58

TITLE: Investigation of the effect of a medium on the quantity of niobium, tantalum, and titanium in solution in conducting a chemical analysis

27

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 4, 1963, 910-912

TOPIC TAGS: acidity effect, precipitation, tartaric acid, sulfuric acid, oxalic acid

ABSTRACT: Dissolving tantalum, niobium, and titanium in hydrofluoric and nitric acids followed by sulfuric acid, presents a problem of hydrolysis of their salts if the acidity of the solution is not correctly regulated. To eliminate these difficulties, it was necessary to establish the correct concentration of sulfuric acid and also to introduce into the solution complexing substances such as tartaric or oxalic acids. Orig. art. has: 1 table and 1 graph.

ASSOCIATION: Vsesoyuznyy Nauchno-Issledovatel'skiy i Konstruktorskiy Institut Khimicheskogo Mashinostroyeniya (NIKhimash) (All-Union Research and Design Institute for Chemical Machine Building)

Card 1/2

BRUYLE, Ye.S.

Solubility in the system $\text{PbO} - \text{Na}_2\text{C}_4\text{H}_2\text{O} - \text{H}_2\text{O}$ at 25° . Zhur.
neorg. khim. 8 no.10:2390-2394 0 '63. (MIRA 16:10)

(Sodium tartrate) (Lead oxides) (Solubility)

ACCESSION NR: AP4010493

S/0080/64/037/001/0216/0216

AUTHORS: Bruyle, Ye. S.; Merkulova, K. S.

TITLE: Complexometric determination of nickel in alloyed steel containing cobalt.

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 1, 1964, 216

TOPIC TAGS: nickel analysis, complexometric analysis, titrimetric analysis, Trilon B, cobalt complex, cobalt amine complex, nickel cobalt separation

ABSTRACT: The nickel in systems containing cobalt may be determined by the usual titration with Trilon if the cobalt is complexed as $[\text{Co}(\text{NH}_3)_6]^{3+}$, which is not titrated by the Trilon, by oxidizing an ammoniacal solution containing the two elements. Thus, an aliquot of a cobalt and nickel containing steel (dissolved in HCl-HNO_3 , treated with concentrated ammonia, cooled and filtered) is treated with ammonium persulfate, boiled and cooled. Ammonia and the dry indicator (murexide ground in NaCl) are added, and the nickel is titrated with Trilon B to a color change from rose to

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ACCESSION NR: AP4010493

violet. Errors do not exceed 1.30%. Orig. art. has: 1 Table.

ASSOCIATION: None

SUBMITTED: 18Aug62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: CH, ML

NR REF SOV: 001

OTHER: 001

Card 2/2

BRUYLE, Ye.S.; MERKULOVA, K.S.

Determination of the solubility of a disodium salt of
ethylenediaminetetraacetic acid (trilon B). Zhur.prikl.
khim. 37 no. 5:1155-1156 My '64. (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy
institut khimicheskogo mashinostroyeniya.

BRUYLE, Ye.S.

System $\text{PbO} - \text{K}_2\text{C}_4\text{H}_4\text{O}_6 - \text{H}_2\text{O}$ at 25°C . Zhur.neorg.khim. 10

no.12:2745-2749 D '65.

(MIRA 19:1)

BRUZ, Vladimir Semenovich, kand.istor.nauk; DZHEDZHULYA, A.Ye. [Dzhedzhulia, A.IE.], kand.istor.nauk, glavnyy red.

[Britain today] Angliia s'ohodni. Kyiv, 1959. 43 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' URSR. Ser.3, no.2) (MIRA 12:5)

(Great Britain)

CZECHOSLOVAKIA/General Problems of Pathology - Shock

U.

Abs Jour : Ref Zhur - Biol., No 2, 1959, 8632

Author : Bruza, A., Smetana, R.

Inst : "

Title : Electrophoregram Changes of Liver Proteins in Traumatic Shock and After the Injection of Carbon Tetrachloride

Orig Pub : Ceskosl. fysiол., 1957, 6, No 4, 516-519

Abstract : Traumatic shock was produced in 22 male rats in a Noble-Collip cylinder. The animals were sacrifice during the 24 hours following this effect. The liver was irrigated with physiological solution; the proteins were extracted with an acetate buffer at a pH of 5.0. Changes occurred as early as 30 minutes after trauma; the quantity of α_2 and β_1 -globulins was increased; of β_2 and γ -globulins was decreased. Electrophoregrams at various intervals after the trauma did not differ from one another. Another 20 animals received 0.5 ml of CCl_4

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